Audio Player

AI1110: Probability and Random Variables
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1 INTRODUCTION

This report presents an analysis of a Python script for a music player application. The application allows users to play random songs from a predefined set of audio files. The code utilizes the Tkinter and Pygame libraries for creating the graphical user interface and handling audio playback, respectively.Also the playlist created has undergone shuffling which is completely random and uniform.

2 CODE

The code consists of several components, including the initialization of required modules, the definition of variables and functions, and the implementation of music playback controls. Here's a breakdown of the code:

2.1 Modules Imported

The following modules are imported:

- numpy - Used for generating random numbers.
- playsound - Used for playing audio files.
- tkinter - Used for creating the graphical user interface.
- pygame - Used for handling audio playback.

2.2 Variables and Functions

The code defines the following variables and functions:

- audio - An empty list that stores the paths of audio files.
- Play() - A function that generates random song paths and populates the audio list with unique songs.

2.3 Implementing Music Playback Controls

The MusicPlayer class includes methods for controlling music playback:

- play_music() - Plays a random song from the audio list using the Pygame mixer.
- next_music() - Stops the current song playback and plays the next random song from the audio list.
- pause_music() - Pauses the currently playing song.
- unpause_music() - Resumes the paused song.
- check_end() - Checks if song has ended.

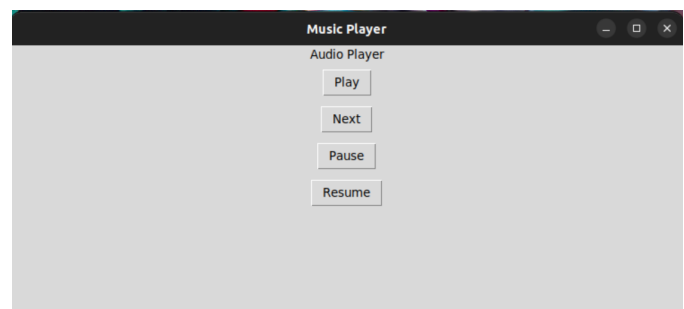## 3 IMAGES

1) The image 1 is of the basic GUI created.

Fig. 1: GUI of Audio Player

2) The image 2 is of terminal and the GUI while songs are being played.

The code for this **Audio Player** can be found at **https://github.com/ksananth4424/AI1110/blob/main/Audio_Player/audioplayer.py**

4 CONCLUSION

The presented code demonstrates a simple music player application with basic playback controls. It
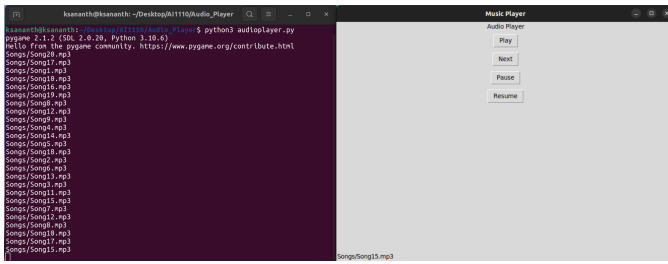
Fig. 2: List of songs that are played

utilizes the Tkinter and Pygame libraries to provide a graphical user interface and handle audio playback. By understanding the code's structure and components, you can further customize and enhance the music player functionality.